## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 14 July 2005 (14.07.2005)

**PCT** 

## (10) International Publication Number WO 2005/063298 A1

(51) International Patent Classification<sup>7</sup>: 47/26, 38/27

A61K 47/12,

(21) International Application Number:

PCT/IB2004/004159

(22) International Filing Date:

13 December 2004 (13.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/531,843

23 December 2003 (23.12.2003)

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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

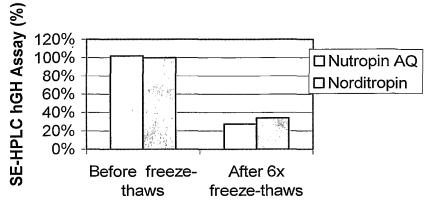
## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STABLE GROWTH HORMONE LIQUID FORMULATION

## Freeze-Thaw Stability of Two Commercial hGH Formulations



(57) Abstract: The present invention is directed to stable liquid growth hormone formulations that remain stable after physical agitation, and after exposure to one or more freeze-thaw events. Formulations of the present invention can be stored long term at a variety of temperatures, even frozen. In the present invention, a combination of buffer and stabilizing agents, including a non-ionic surfactant (e.g., polysorbate 20), a polymer stabilizer (e.g., polyethylene glycol), and other optional stabilizers combine to provide unexpected stability to aqueous formulations of a growth hormone (e.g., human growth hormone).